

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-285142

(43)Date of publication of application : 09.10.1992

(51)Int.Cl.

C22C 38/00  
C21D 7/06  
C22C 38/24  
C23C 8/32

(21)Application number : 03-046416

(71)Applicant : SUZUKI KINZOKU KOGYO KK  
TOYOTA MOTOR CORP  
TOUGOU SEISAKUSHO:KK  
NIPPON STEEL CORP

(22)Date of filing : 12.03.1991

(72)Inventor : ONODA MITSUYOSHI  
HAYASHI HIROAKI  
NAKANO OSAMU  
ISHIKAWA YUJI  
UCHIDA HISASHI

(54) OIL TEMPERED STEEL WIRE FOR SPRING AND HIGH STRENGTH SPRING

(57)Abstract:

PURPOSE: To show an oil tempered steel wire for a high strength spring and a high strength spring having high strength and in which breaking at the time of spring working is prevented.

CONSTITUTION: In a low alloy steel wire contg. 0.50 to 0.80% C, 1.00 to 2.50% Si, 0.40 to 1.00% Mn, 0.40 to 2.00% Cr, 0.05 to 0.60% V and 0.10 to 1.00% Mo, its surface is decarburized at the time of oil tempering. This oil tempered steel wire is hard to break at the time of spring working. The high strength spring can be obtd. by subjecting the above oil tempered steel wire to spring working, carbo-nitriding and shot peening. By this treatment, the hardness on the surface of the spring increases into the spring having high strength and high fatigue strength.

## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]